IN THE SPECIFICATION

Please amend paragraphs [009], [013], [014], [032], [033] and [035] of the specification as shown below, in which deleted terms are indicated with strikethrough and/or double brackets, and added terms are indicated with underscoring.

[009] To achieve the above object, according to a first feature of the present invention, there is provided a high-turning and high-transonic blade for use in a blade cascade of an axial-flow compressor including a large number of blades, each of the blades having an intrados adapted to generate a positive pressure and an extrados adapted to generate a negative pressure, disposed in an annular fluid passage, wherein a distribution of flow speed on the extrados of the blade has a supersonic region of a substantially constant flow speed in the rear of a first large value of the flow speed behind a leading edge and inside a position corresponding to 15% of a chord-wise length from [[a]] the leading edge.

[013] According to a third feature of the present invention, there is provided a high-turning and high-transonic blade for use in a blade cascade of an axial-flow compressor including a large number blades, each having an intrados adapted to generate a positive pressure and an extrados adapted to generate a negative pressure, disposed in an annular fluid passage, wherein a first small value of curvature of the extrados is set to be sufficiently small at a leading edge of the blade, and a variation in curvature in the rear of the first small value behind the leading edge is set to be small, whereby a first strong shock wave is induced at the leading edge to generate a pressure loss in a main flow, and a second weak shock wave is induced in the rear of the first shock wave to reduce a pressure loss in a following flow on the blade, whereby total pressure loss due to the first and second shock waves is reduced. Such a Reduction reduction in pressure

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loss is in comparison to pressure loss of a conventional blade which induces a first weak shock wave at the leading edge and a second strong shock wave in the rear of the first shock wave.

[014]   With the above arrangement, the first [[large]] small value of curvature of the extrados is set to be sufficiently small at the leading edge of the blade, and the variation in curvature in the rear of behind the minimum value leading edge is set to be small.   Therefore, the first strong shock wave is induced at the leading edge to generate the pressure loss in the main flow, and the second weak shock wave induced in the rear of behind the first shock wave is weakened to suppress the boundary layer separation, thereby reducing the pressure loss in the following flow on the blade.   Therefore, the total pressure loss can be reduced by the reduction in pressure loss of the following flow on the blade, the reduction far outweighing the offset of the pressure loss of the main flow.

[032]   The present invention relates to a high-turning and high-transonic blade for use in a blade cascade for an axial-flow compressor.   In Fig.1 showing blade cascades, a solid line indicates a blade W of the embodiment, and a broken line indicates a blade W of a comparative example. Each of the blades W has a intrados Sp (a positive pressure surface) and an extrados Ss (a negative pressure surface) each extending from a leading edge El to a trailing edge Et, and is of a high-turning type having a large camber line (a line that is equidistant at all points between the intrados and the extrados of the blade), and a turning angle θ is greater than or equal to or larger than 40°.   In the embodiment, a pitch of the blade cascade is defined as 50% of a chord length C (a linear distance between the leading edge El and the trailing edge Et).

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[033]   Fig.2 shows a distribution of curvature of the extrados Ss (negative pressure surface) [[of]] for each of the blades W. The distribution of curvature [[in]] of the blade W of the embodiment shown by a solid line has a first maximum value a immediately in the rear of behind the leading edge El (a 0% position), a first large value b in the vicinity of a 40% position, a second large value c in the vicinity of a 90% position, and a second maximum value d immediately in front of the trailing edge Et (a 100% position). The distribution of curvature of this [[This]] blade W also has a first small value e in immediately in the rear of behind the first maximum value a, a second small value f in the vicinity of a 70% position, and a third small value g immediately in front of the second maximum value d. As the first small value e is immediately in the rear of behind the first maximum value a, its curvature is as extremely small as 0.6. Then, the curvature is gently increased from the first small value e toward the first large value b.

[035]   The term "curvature" used herein indicates a curvature, non-dimensioned a non-dimensional value, represented by the chord length C. Namely, the curvature is an inverse number of a radius of curvature, but the radius of curvature is a non-dimensional value non-dimensioned represented by the chord length C. Therefore, if an actual radius of curvature is equal to the chord length C, the non-dimensioned non-dimensional radius of curvature is 1.0, and the curvature is 1.0. If the actual radius of curvature is two times the chord length C, the non-dimensioned non-dimensional radius of curvature is 2.0, and the curvature is 0.5. If the actual radius of curvature is one half of the chord length C, the non-dimensioned non-dimensional radius of curvature is 0.5, and the curvature is 2.0.

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